Remarks

Claims 1, 3-8 and 10-21 were presented for prosecution. Claims 1, 3-8 and 10-11 were rejected under 35 USC 103(a) as being unpatentable over Wu (US 6,614,936) in view of Mishama (US 5,488,418). Claims 12-21 were rejected under 35 USC 103(a) as being unpatentable over De Bonet (6,510,177) in view of Strongin (US 5,872,866). Claims 1, 8, and 11 have been amended. Claims 1, 8, and 11 are amended based on FIG. 2 and line 17, page 5 to line 15, page 6 of the present application. No new matter is believed added.

Applicants traverse the rejection of claims 1, 3-8 and 10-11 for the following reasons. To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

With regard to claims 1, 3-8 and 10-11, Applicants submit that the cited arts fail to teach or suggest each of the claim limitations. For instance, currently amended claim 1 (and similarly claims 8 and 11) recites "an enhancement layer encoder that includes a plurality of discrete cosine transform (DCT) modules and a selection system for selecting *only one* of the DCT modules for performing DCT computation, wherein each of the plurality of DCT modules comprises a different precision and wherein *the selection is made before the DCT computation is performed.*"

Applicants submit that each of the features of claim 1 is neither taught nor suggested by Wu, Mishama, or their combination. For instance, claim 1 provides an enhancement layer in which the DCT module is selected before performing a DCT computation. This feature is clearly shown, e.g., in FIG. 2 of the present application in which the DCT selection system 34 is implemented before a selected one of the multiple DCTs (of different precision) are executed. Reasons for preselecting the DCT are discussed in Applicants' specification, e.g., in lines 20-22, page 5 of the present application, Applicants state that "[a]lso included in the EL encoder 32 is a DCT selection system 34 that includes a decision-making mechanism for choosing the appropriate DCT based on, for example, information regarding the instantaneous computing resources of the encoder." In further explanation of the benefits for such arrangement, the present application also states that such an arrangement can "achieve lower computing complexity" (line 12, page 6) and "the encoding at the sender site" can "run faster to achieve a higher frame rate" (lines 14-15, page 6).

In contrast, Mishama's DCT switch (selection) is made *after* multiple DCT computations are performed, which is exactly opposite of the claimed invention. In Mishama's Fig. 50(B), after the three seemingly identical DCT circuits 77 individually receive their input from the field sum/difference blocking circuit 74, the in-frame blocking circuit 75, and the in-field blocking circuit 76, and perform the DCT, the outputs are then forwarded to the switch 79, "which switches outlets from the DCT circuits 77" (column 24, line 26). The switch operation seems to be controlled by the generated code amount comparing unit 78, "which compares the generated code amount on the basis of outputs from the DCT circuits 77" (column 24, lines 24-25). Apparently,

according to Mishama's disclosure, the inputs have to be first fed into the three DCT circuits 77 to cause each of the DCTs to render a "generated code." The generated code from the three DCT circuits 77 are then compared by the generated code amount comparing unit 78. For example, a comparison and switch method "may be conducted in which an output having the largest number of DCT coefficients having the value of 0 is selected" (column 24, lines 42-44). Since Mishama's DCT switch (selection) is made *after* the DCT computation is performed in the three DCT circuits 77, it cannot achieve the same result and benefit of lower DCT computing complexity as the claimed invention, which makes the selection *before* the DCT computation is performed.

Furthermore, the selection system of amended claim 1 selects *only one* of the DCT modules for performing a specific precision DCT computation. Because only one DCT module is executed, Applicants' invention can "achieve lower computing complexity" (line 12, page 6 in the specification). In lines 20-22, page 5, the present application discloses "a DCT selection system 34 that includes a decision-making mechanism for choosing *the appropriate DCT* based on, for example, information regarding the instantaneous computing resources of the encoder." For example, in order to meet a rigid "bandwidth availability," "*a lower precision DCT* can be used to achieve lower computing complexity without causing additional distortion" (lines 11-13, page 6). Because the decision-making mechanism of the DCT selection system 34 would first check "relevant criteria, including: the encoding bit rate, available bandwidth, desired quality (i.e., SNR), decoder capability, etc." (lines 2-4, page 6) before an appropriate DCT precision is selected and performed, unnecessary and excessive DCT computations

can be avoided and therefore "the encoding at the sender site" can "run faster to achieve a higher frame rate" (lines 14-15, page 6).

In contrast, Mishama performs the DCT computations in *all* the three DCT circuits 77. To borrow an example from Mishama's own disclosure, in order to select "an output having the largest number of DCT coefficients having the value of 0" (column 24, lines 42-44), all the three DCT circuits 77 have to perform substantial DCT computations and render the generated codes. Afterwards, the generated code amount comparing unit 78 can then "compare[] the generated code amount on the basis of *outputs from the DCT circuits 77*" (column 24, lines 24-25) to determine which output of the three DCT circuits 77 the switch 79 should switch to. Thus, in Mishama, each of the three DCT circuits 77 have to perform DCT computations before the comparison and switch can be implemented. Therefore, Mishama is substantially different from claim 1 of the present invention, which selects *only one* of the DCT modules for performing DCT computation.

Applicants therefore submit that independent claims 1, 8, and 11 are not rendered obvious in light of Wu, Mishama, or their combination. Reconsideration in view of the above amendments and remarks is respectfully requested. Applicants further submit that the dependent claims (claims 3-7, and 10) not specifically addressed herein are allowable for the reasons discussed above, as well as for their own additional features. Reconsideration of claims 3-7 and 10 is respectfully requested. Claims 12-21 are believed allowable for reasons previously stated.

These amendments are being made to facilitate early allowance of the presently claimed subject matter. Applicants do not acquiesce in the correctness of the objections

and rejections and reserve the right to present specific arguments regarding any rejected claims not specifically addressed. Further, Applicants reserve the right to pursue the full scope of the subject matter of the original claims in a subsequent patent application that claims priority to the instant application. Reconsideration in view of the above amendments and following remarks is respectfully requested.

If the Examiner believes that anything further is necessary to place the application in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney at the telephone number listed below.

Respectfully submitted,

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